

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. All cancelled claims are cancelled without prejudice.

Listing of Claims:

1. (original) A method for determining the presence of coliform bacteria in a water sample comprising the steps of:
 - a) separating said bacteria from said sample using a first filter means;
 - b) culturing said bacteria in a broth comprising nutrients for supporting growth of said bacteria and an inducing agent for inducing enzyme production in said bacteria;
 - c) separating said bacteria from said broth using a second filter means;
 - d) exposing said bacteria to a lysing agent;
 - e) incubating a chemiluminogenic substrate of said enzyme with said enzyme to cause cleavage of said substrate, thereby producing a luminescent product;
 - f) initiating light emission by exposing said luminescent product to an enhancing agent; and,
 - g) detecting said light emission to thereby determine the presence of said bacteria in said sample.
2. (cancelled).
3. (currently amended) The method of claim 1 ~~or 2~~ wherein said bacteria are separated from said broth before being exposed to said lysing agent.
4. (currently amended) The method of ~~any one of claims 1 to 3,~~ wherein said bacteria are on said second filter means during exposure to said lysing agent.
5. (currently amended) The method of ~~any one of claims 1 to 4,~~ wherein said light emission is detected by means of a luminometer.
6. (currently amended) The method of claim ~~5~~ 1, wherein said luminescent product is on said second filter means during detection of said light emission.

7. (currently amended) The method of claim 6 5, wherein said luminescent product is on said second filter means during detection of said light emission and wherein said second filter means is placed within said luminometer during detection of said light emission.
8. (cancelled).
9. (currently amended) The method of ~~any one of claims 1 to 8~~, wherein said culturing is at a temperature of about 22 to 45 °C for about 2 to 10 hours.
10. (currently amended) The method of ~~any one of claims 1 to 9~~, wherein said chemiluminogenic substrate comprises 1,2-dioxetane.
11. (currently amended) The method of ~~any one of claims 1 to 10~~, wherein said enhancing agent comprises quaternary ammonium homopolymer.
12. (cancelled).
13. (currently amended) The method of ~~any one of claims 1 to 13~~, wherein said enzyme is β -D-galactosidase.
14. (original) The method of claim 13, wherein said culturing is at a temperature of about 35 °C for about 5 hours.
15. (currently amended) The method of claim 13 ~~or 14~~, wherein said inducing agent comprises isopropyl- β -D-thiogalactopyranoside (IPTG), lactose, or a combination thereof.
16. (currently amended) The method of ~~any one of claims 13 to 15~~, wherein said substrate comprises 3-chloro-5-(4-methoxyspiro{1,2-dioxetane-3,2'-(5'-chloro)-tricyclo-[3.3.3.3^{3,7}]decan}-4-yl)phenyl β -D-galactopyranoside.
17. (cancelled).
18. (cancelled).
19. (currently amended) The method of ~~any one of claims 1 to 12~~, wherein said enzyme is β -D-glucuronidase.
20. (original) The method of claim 19, wherein said culturing is at a temperature of about 44.5 °C for about 9 hours.
21. (currently amended) The method of claim 19 ~~or 20~~, wherein said inducing agent comprises methyl- β -D-glucuronide (Met-Glu).

22. (currently amended) The method of ~~any one of claims 19 to 24~~, wherein said substrate comprises sodium 3-(4-methoxyspiro{1,2-dioxetane-3-,2'-(5'-chloro)-tricyclo-[3.3.1.1^{3,7}]decan}-4-yl)phenyl β -D-glucuronate.
23. (cancelled).
24. (cancelled).
25. (currently amended) The method of ~~any one of claims 1 to 24~~, wherein said lysing agent comprises toluene, successive freeze thaw cycles, a change of pressure, lysozyme, a detergent, octylphenoxypolyethoxyethanol nonionic surfactant, potassium dihydrogen phosphate, polymyxin-B, or a combination thereof.
26. (cancelled).
27. (currently amended) The method of ~~any one of claims 1 to 26~~, wherein said broth further comprises an inhibiting agent for inhibiting the growth of non-target organisms
28. (cancelled).
29. (original) A method for determining the quantity of coliform bacteria in a water sample comprising the steps of:
- a) separating said bacteria from said sample using a first filter means;
 - b) culturing said bacteria in a broth comprising nutrients for supporting growth of said bacteria and an inducing agent for inducing enzyme production in said bacteria;
 - c) separating said bacteria from said broth using a second filter means;
 - d) exposing said bacteria to a lysing agent;
 - e) incubating a chemiluminogenic substrate of said enzyme with said enzyme to cause cleavage of said substrate, thereby producing a luminescent product;
 - f) initiating light emission by exposing said luminescent product to an enhancing agent; and,
 - g) measuring said light emission to obtain a light measurement corresponding to the quantity of said enzyme to thereby determine the quantity of said bacteria in said sample.

30.– 85. (cancelled).

86.(original) A kit for determining the presence of coliform bacteria in a drinking water sample comprising the steps of:

- a) separating said bacteria from said sample using a first filter means;
- b) culturing said bacteria at a temperature of about 22 to 45 °C for about 2 to 10 hours in a broth comprising nutrients for supporting growth of said bacteria and an inducing agent comprising isopropyl- β -D-thiogalactopyranoside (IPTG) or methyl- β -D-glucuronide (Met-Glu) for inducing production of an enzyme in said bacteria;
- c) separating said bacteria from said broth using a second filter means; followed by,
- d) exposing said bacteria on said second filter means to a lysing agent comprising polymyxin-B;
- e) incubating a chemiluminogenic substrate of said enzyme comprising 1,2-dioxetane with said enzyme to cause cleavage of said substrate, thereby producing a luminescent product on said second filter means;
- f) initiating light emission by exposing said luminescent product to an enhancing agent comprising quaternary ammonium homopolymer; and,
- g) detecting or measuring said light emission using a luminometer by placing said second filter means with said luminescent product within said luminometer to thereby determine the presence or quantity of said bacteria in said sample.